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ABSTRACT

This document reports on a project designed to determine whether the amount and type of field experiences of students prior to student teaching would influence the achievement of competencies and result in different instructional patterns and attitudes of prospective teachers. Important subquestions were whether it was desirable to provide basic theory in the concepts of NUSTEP (Nebraska University Secondary Education Program--a pre-student teaching, competency-based program) prior to field experiences and whether basic skill competencies should be demonstrated in simulated experiences prior to field experiences. Results of the research are presented in a series of tables. Conclusions are drawn for each hypothesis and recommendations for field experiences are made. (DDO)

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The Impact of Field Experiences on the Competencies and Attitudes of Prospective Social Studies Teachers

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INTRODUCTION

> A most perplexing problem over the years has been how to relate theory and practice. Should theory or practice come first? Should they be integrated? How much theory and how much practice? Should practice be simulated or provide in real life situations or both? Implementation of CBTE strategy pushes educators to relate theory and practice in a systematic way and in doing so to make more effective use of the schools.[1]

The Nebraska University Secondary Teacher Education Program (NUSTEP) has been struggling with the above questions since its inception in 1969. Designed as a pre-student teaching competency-based program, it also has a partial off-campus or field base in that two half-days per week were provided for "teaching assisting" in the public schools after the prospective teachers successfully completed the Spiral I basic skill competencies.

NUSTEP has conducted a series of research projects to gather important data to assist in making decisions about the program. Among these studies was one by Walter[2] seeking to determine the value of field experiences for the prospective teachers prior to student teaching. Comparing NUSTEP students who had the regular two half-days per week field experiences with a control group

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1 Massanari, Karl. "CBTE's Potential for Improving Educational Personnel Development." JOURNAL OF TEACHER EDUCATION, XXIV (Fall, 1973), p. 246.

2 Walter, Larry J. AN ASSESSMENT OF THE TEACHER-ASSISTING COMPONENT OF THE NEBRASKA UNIVERSITY SECONDARY TEACHER EDUCATION PROGRAM. (Unpublished dissertation), University of Nebraska, 1973.

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who completed all performance requirements by use of simulated experiences rather than field experiences, Walter found that the students who participated in the field experiences were more positive about the NUSTEP program and more skilled in seven of nine teaching behaviors: using questioning skills, using instructional objectives, using systematic evaluation techniques, achieving closure for lessons taught, using student-centered approaches, providing appropriate practice experiences for pupils, and applying principles of positive reinforcement.[3]

STATEMENT OF PROBLEM

Building on the conclusion of Walter that field experiences prior to student teaching were valuable, this research project was designed to determine whether the amount and type of field experiences would influence the achievement of competencies and result in different instructional patterns and attitudes of prospective teachers. Important subquestions were whether it was desirable to provide basic theory in NUSTEP concepts prior to field experiences and whether the basic skill competencies should be demonstrated in simulated experiences prior to field experiences.

The specific research hypotheses were stated as follow:

1. The prospective social studies teachers completing NUSTEP in a completely field-based (experimental) program will score as high or higher than the regular (control) NUSTEP students on a cognitive post-test measuring understanding of basic NUSTEP concepts.

2. The experimental group will achieve ratings as high or higher than the control group on the basic instructional skills incorporated into the Spiral I competencies of NUSTEP.

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3. Ibid

3. The experimental group will achieve instructional patterns recognized as meeting social studies goals (student-centered and inquiry oriented) as readily as the control group.

4. The experimental group will express attitudes about their NUSTEP experiences as positive as or more positive than those expressed by the control group.

RESEARCH DESIGN

During the second semester, 1972-1973, twenty of fifty-one students registered for NUSTEP - SOCIAL STUDIES were selected at random to participate in ths research project. Ten of the students were placed randomly in an experimental group which conducted NUSTEP completely in field settings, while the other ten students followed the regular NUSTEP program. The two groups were given the same orientation to NUSTEP, the same instructional materials, the same competencies to achieve, and the same staff member to proctor and assist them in their NUSTEP activities. Time given to the two groups by NUSTEP staff members was the same, but the control group received instruction form several staff members while the experimental group received instruction from only the proctor. The basic variables between the two groups were:

1. Amount of field experiences-
   a. The control group spent approximately two half-days per week for ten weeks in "teacher assisting" field experience.
   b. The experimental group spent approximately five half-days per week for thirteen weeks.

2. Amount of campus classes and simulated experiences-
   a. The control group had approximately fifteen half-days in Spiral I instructional skill development activities and then approximately two half-days per week in Spiral II social studies methods and principles activities for ten weeks.

3. The sequence of learning activities-
   a. The control group followed the Spiral I and II sequence of Learning Tasks and completed their competencies as they moved through the various Tasks.
   b. The experimental group considered NUSTEP - SOCIAL STUDIES concepts as the need for them grew out of the work with students and the cooperating teachers. Competencies were demonstrated as they fit into the field experiences.

Research data were gathered on a fixed schedule with the cognitive test given prior to instruction and following Spiral II, the instructional patterns gathered prior to instruction, at the end of Spiral I, and near the end of Spiral II, the competency ratings gathered during and at the end of Spiral I, and the attitudes of the prospective teachers gathered at the end of the project. The data on cognitive understandings and on the competency ratings were subjected to a triple t-test using the NUSTEP computer program and the entire findings were analyzed and reported with conclusions and recommendations.

FINDINGS

Knowledge/Understanding of NUSTEP - SOCIAL STUDIES Concepts

The results of the pre-post test of basic concepts in NUSTEP - SOCIAL STUDIES are reported in Table 1. Both groups began NUSTEP understanding approximately fifty-five per cent of the concepts covered on the test. Both groups increased their understanding of these concepts and all individuals within the two groups received a "passing" mark on the post test.

The mean score of the experimental group on the post test was seven points above that of the control group, a statistically significant difference at the .05 level.

Table 1

Comparison of Group Scores on NUSTEP Cognitive Pre and Post Tests
(Total Score = 100 Points)

	Pre Test		Post Test	
	Control Group	Experimental Group	Control Group	Experimental Group
Raw Scores:	66	66	100	100
	66	63	94	97
	65	63	89	97
	61	60	86	97
	60	54	86	95
	57	54	84	95
	48	54	82	91
	45	49	80	88
	26	41	70	88
	*	32	*	81
Mean:	55.0	55.4	85.7**	92.9**
Number of Prospective Teachers Reaching Minimum Acceptable Level on Test:	0 of 9	0 of 10	9 of 9	10 of 10

*Student dropped NUSTEP in middle of project

**Difference of Post Test significant at .05 level

Ratings on NUSTEP Spiral I Basic Instructional Skills

Eight specific instructional skills plus a culminating instructional activity in which all eight skills were demonstrated together were rated on a five-point scale. Table 2 provides data on the ratings for each group.

All of the NUSTEP Spiral I skills/competencies were demonstrated at satisfactory or higher levels of proficiency by both groups. The

experimental group achieved higher mean ratings on all eight specific skills and on the Spiral I culminating experience than the control group.

Table 2

Comparison of Spiral I Basic Skill Ratings of Control and Experimental Groups (Code: 5 = Exemplary; 4 = Good; 3 = Satisfactory - meets NUSTEP criteria for skill; 2 = Weak - does not meet criteria for skill; 1 = Not demonstrated or not appropriate)

Skill/Competency	Control Group (Mean Rating)	Experimental Group (Mean Rating)	Level of Significance
1. Establish Set	3.6	3.8	NS
2. Achieve Closure	3.3	3.6	NS
3. Questioning	3.8	4.2	.05
4. Reinforcement	3.3	4.2	.01
5. A V Use	3.6	3.9	NS
6. Tutoring Skills	3.5	4.1	NS
7. Small Group Leadership	3.3	4.1	.05
8. Behavioral Objectives	3.2	3.9	.01
9. Spiral I Culminating Exp.	3.5	4.2	.01
Composite Mean Rating	3.5	4.0	.01
	N = 9	N = 10	

On four of the eight specific skills and on the Spiral I culminating experience, the differences in mean ratings were significant at either the .01 or .05 levels. The composite mean rating showed that the basic skills demonstrated by the experimental group were significantly (.01 level) higher than the basic skills demonstrated by the control group.

Instructional Behavioral Patterns

A trained observer checked for reliability coded the teacher and student inquiry/interaction patterns at three times during the semester. These data are shown in Table 3.

Generally, the two groups entered NUSTEP with similar instructional patterns -- about two-thirds teacher talk; about three-fourths cognitive

talk (statements which are strictly subject matter and do not relate to another person or an idea expressed by another person in the group); and questions constituting about fifteen per cent of the total interaction.

Table 3

Comparison of Instructional Behaviors and Patterns of Control and Experimental Groups (Percentages of Total Interaction)

Cognitive and Affective Behaviors	Baseline		End of Spiral I		End of Spiral II	
	Cont.	Exp.	Cont.	Exp.	Cont.	Exp.
Cognitive Behaviors						
1. Set and Problem Formulation	13.2	8.8	8.0	11.0	5.6	5.4
2. Hypothesizing	3.4	.9	.8	4.1	.8	1.2
3. Data Collection and Analysis	69.3	62.7	84.8	42.1	58.1	49.4
3c - Facts	15.5	38.4	28.6	4.8	11.5	8.0
3a - Analysis	53.8	24.3	56.2	37.3	46.6	41.4
4. Decisions	3.4	5.2	1.5	4.2	3.8	3.7
Total Cognitive Beh.	73.8	77.6	66.5	61.4	68.3	59.9
Affective Behaviors						
5. Openness; Divergent views	1.0	2.0	2.2	4.0	3.9	5.3
6. Respect; Reinf.	3.9	4.4	7.4	10.7	5.7	6.8
7. Questions	14.5	15.1	15.8	17.4	15.2	16.1
8. Process Statements	.0	.0	.0	.1	.1	4.9
9. Assessment State.	2.5	.5	5.0	3.9	2.3	5.0
Total Affective Beh.	21.9	22.0	30.4	36.1	27.8	38.2
Total Teacher Talk	68.8	68.7	73.4	51.6	52.9	29.2
Total Student Talk	27.0	32.2	22.9	45.8	43.2	68.9
Total Silence/Other	4.2	.1	3.7	2.6	3.9	1.9

As shown in Table 3, the control group made minor modifications in their instructional patterns during Spiral I activities on campus, but the overall pattern remained a teacher-centered, content-oriented approach. The control group actually increased their amount of teacher talk and reduced student talk to only 22.9 per cent of the total verbal interaction, a shift contrary to the NUSTEP - SOCIAL STUDIES "models of instruction." The control group did increase somewhat their talk in the affective domain (talk which not only relates to the content but also indicates an openness to people, ideas, and divergent views, a desire to build upon the work of others and to show respect for the efforts of others, questions which seek to involve others in the decision-making process of the group, and talk which indicates the use of process and assessment thoughts in the fulfillment of the objectives of the group or individual), especially the reinforcement and the assessment behaviors.

When the control group became active in teacher assisting (field experiences two half-days per week), they increased student talk to 43.2 per cent of the total interaction and generally appeared to conduct more open, higher level discussions than before. Still, they remained basically content-oriented and teacher-directed in their instruction.

The experimental group, by contrast, appeared to change their instructional behaviors quite significantly in the short Spiral I period and even more in the Spiral II ten week period.

At the end of Spiral I, student talk increased to 45.8 per cent of the total talk and showed a dramatic shift from factual (3c) statements to more analysis (3a) statements. The experimental group also showed a more balanced pattern of instructional behaviors with the increased use of hypotheses, openness statements, and assessment statements.

By the end of Spiral II, the experimental group demonstrated much student-centered instruction as indicated by 68.9 per cent student talk in their final taping. The experimental group continued to show a high analysis/factual ratio and an increasing amount of affective behaviors (38.2 per cent). All five of the specific categories of affective behaviors were utilized five per cent or more by the experimental group but only two of these same categories of behaviors were utilized to that expent by the control group.

Final comparisons of instructional behaviors of the two groups indicated that the experimental group moved much more rapidly to involve students in the learning activities, appeared to use the basic skills of reinforcement, assessment, and process statements more readily, and in general achieved better balance and a wider range of behaviors in their teaching than did the control group. In terms of NUSTEP competencies, the experimental group reached instructional behavioral goals by the end of Spiral I whereas the control group reached these same goals at the end of Spiral II.

Attitudes of Prospective Teachers

Both groups of NUSTEP students expressed positive attitudes about their cooperating teachers, their proctor, the NUSTEP Learning Tasks

and materials, and their field experiences. Table 4 provides data on these attitudes.

Table 4

Comparison of Attitudes of Control and Experimental Groups

Items Assessed	Control Group (N = 9)	Experimental Group (N = 10)
1. Assessment of NUSTEP Instruction Control Group = Multiple Staff Experimental Group = Proctor		
a. Not very effective	0	0
b. Satisfactory	0	0
c. Helpful and effective	3	2
d. Very good - excellent "models"	6	8
2. Assessment of Cooperating Teachers		
a. Not very effective	0	0
b. Satisfactory	0	0
c. Helpful and effective	3	3
d. Very good - excellent "models"	6	7
3. Assessment of Proctor		
a. Not very helpful	0	0
b. Satisfactory	0	0
c. Helpful - worked well with us	2	2
d. Very effective as proctor	7	8
4. NUSTEP Tasks and Materials		
a. Confusing and difficult	0	0
b. Adequate; goals attainable	1	0
c. Interesting & worthwhile act.	3	5
d. Excellent materials and Tasks	5	5
5. Field Experiences		
a. Mostly a waste of time	0	0
b. Satisfactory; served purpose	1	0
c. Worthwhile-gained quite a bit	4	2
d. Excellent-gained a great deal	4	8
6. Overall Recommendation		
a. Regular program- two half-days	2	0
b. Fulfilling NUSTEP entirely in field experiences	7	10

These figures indicate generally more positive attitudes from the experimental group, especially about their field experiences. No indications were given that the experimental group felt slighted in instruction, materials or proctoring by being off-campus the entire semester.

CONCLUSIONS AND RECOMMENDATIONS

This research was conducted to determine the relative successes of prospective teachers in two alternative field operations within the total competency-based NUSTEP program. The findings reported herein form the basis for the following conclusions and recommendations:

1. Hypothesis 1 was accepted -- the prospective social studies teachers in the experimental group scored significantly (.05 level) higher on the cognitive post test than did the control group.

2. Hypothesis 2 was accepted -- the experimental group achieved ratings higher than the control group on each of the eight specific skills measured and on the Spiral I culminating experience. On four of the eight specific skills, on the culminating experience, and on a composite mean rating, these differences in ratings proved to be statistically significant at the .01 or .05 levels.

3. Hypothesis 3 was accepted -- the experimental group demonstrated instructional behaviors and patterns similar to the NUSTEP - SOCIAL STUDIES "models of instruction" faster and to a greater extent than did the control group.

4. Hypothesis 4 was accepted -- the attitudes of the experimental group were generally more positive than those of the control group.

5. Acceptance of the four hypotheses lends support to the conclusion that competency-based programs prior to student teaching can be conducted entirely in field settings if desired. Recognizing the limitations of this study, the evidence gathered in the areas of cognitive understandings, skill proficiency, instructional patterns, and attitudes provides program developers a base for further action.

6. Increased field experiences appear to enhance the level of competency exhibited by prospective teachers. In both the basic skills area and the instructional patterns area the achievements of the experimental group attest to the value of the additional field experiences. Caution must be observed, however, lest the desire for more field experience endangers the need for competency achievement. Field experiences must not become an end in themselves, but must be viewed as means to achieve the goals of the competency-based program.

7. Intensive skill development activities in simulated settings, while producing satisfactory ratings for the control group in Spiral I, did not produce skill ratings at the level achieved by the field-based group. The merits of providing early field experiences should be given serious consideration. In addition, the merits of continuous field experiences (at least five consecutive half-days rather than two half-days per week) should warrant serious consideration. Combining a series of intensive field experiences with periodic on-campus activities to assess progress, recycle where needed, and to introduce new areas of competencies might be very valuable in pre-student teaching programs.

8. The value of careful and continuous monitoring of the pre-student teaching field experiences must be emphasized. In this project, the proctor served as the "field instructor" as well as the monitor and had daily contact with the prospective teachers just as he or others do in the regular program. The success of this or any other competency-based program rests primarily on the quality of the personnel, both in the schools and within the program staff. Their understanding of the total program, their commitment to the goals and competencies of the program, and their ability to combine the goals and needs of the schools with the competencies and needs of the prospective teachers are key factors in the success of any teacher education program.

9. These findings, building as they do upon the study by Walter, strongly recommend extensive field experiences for prospective teachers prior to their student teaching. Both alternative field-based programs studied produced desired achievement with the differences in achievement favoring the expanded field-based alternative. Whether the field experiences should be the entire program for a given semester deserves further study and must consider cost, staffing, school relations and other factors. Decisions can be made, however, with evidence which states that competencies can be demonstrated in field settings without prior training in simulated settings and that theory and practice can be combined together in a well organized program with both a competency base and a field base.